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Chapter 2—Introduction

This chapter provides the background, purpose and scope of the CWCS for the District. It describes the goals, approach, value, legislative mandate and guidance, background on the DC Fisheries and Wildlife Division, problem and need, threats to wildlife in the District, existing conservation legislation in the District, the list of partners that contributed to the development of this CWCS.

Goals, Approach & Value

Goals include:

- Identifying species of greatest conservation need and their habitats in order to develop and implement conservation actions targeted to those species
- Improving the understanding of species in order to enhance the ability to make management decisions
- Conserving and enhancing priority habitats
- Fostering partnerships among conservation agencies and organizations
- Generating interest and participation in wildlife conservation among the general public, students, and youth through education and outreach
- Strengthening existing conservation actions and regulations

In accomplishing these goals, the DC Fisheries and Wildlife Division staff uses this **approach**:

- Use the best information available to identify species of greatest conservation need and their priority habitats
- Protect species of greatest conservation need by conserving their habitats
- Identify critical knowledge gaps and future data needs as well as identify the agencies and organizations most capable of helping fill those gaps and needs
- Address the local concerns that affect the larger surrounding region with which the District shares habitats and migratory paths
- Monitor progress and revise the strategy to account for changing conservation needs over time
- Develop invaluable partnerships that combine the expertise of the District's most experienced land managers with the concerns of environmental groups and the interest of the District's residents

The **value** of this strategy includes, but is not limited to:

- Developing the first nationwide effort for wildlife conservation
- Developing a District-wide conservation strategy which incorporates the expertise of all conservation agencies and organizations as well as the public
- Saving species from becoming endangered
- Saving tax dollars from being used to restore populations of species listed by the Endangered Species Act
- Ensure implementation of the CWCS for at least 10 years by matching federal funds
- Protecting species that have not traditionally received federal funds, such as non-game wildlife species
- Providing new guidance to conservation agencies in implementing the most efficient technologies and allocating manpower, funds and other resources
- Providing new ways for nongovernmental conservation organizations to collaborate with governmental agencies and affect conservation policy
- Growing interest and participation in conservation among the District's residents and youth
- Fostering an environment that flourishes with fish and wildlife for nature enthusiasts, such as birdwatchers, boaters and fishermen
- Bringing together conservationists across the country as partners in protecting the nation's natural treasures

Legislative Mandate and Guidance

Financial support at the District level for wildlife conservation is critical, but conservation governance at the national level is also necessary. In 2001, Congress addressed this need and developed new conservation funding legislation called:

- Wildlife Conservation and Restoration Program, and
- State Wildlife Grants (SWG) Program.

The Wildlife Conservation and Restoration Program was created by the Commerce, Justice and State Appropriations Act of FY 2001, Title IX, Public Law 106-553. This act provided one year of appropriations for fish and wildlife conservation for the development of the CWCS for all states and the District of Columbia.

The State Wildlife Grants (SWG) Program was created by the Department of the Interior and Related Agencies Appropriations Act of 2002, Title I, Public Law 107-63. The program was developed with support from Teaming with Wildlife, a bipartisan coalition working to increase state funding for wildlife conservation. This program provides funding aimed at preventing wildlife population declines and keeping common species common. The funds are intended to work in conjunction with other funding sources, not to replace existing programs, and are only a small portion of the funding that is actually

required to implement the CWCS conservation actions. The other necessary funds will be matched by partners.

As Congressionally mandated by this program, each state and the District of Columbia was required to submit a CWCS to the US Fish and Wildlife Service by October 2005. These strategies provide an essential foundation for the future of wildlife conservation and a stimulus to engage the states, federal agencies and other conservation partners to think strategically about their individual and coordinated roles in prioritizing conservation efforts.

These programs were designed to provide annual allocations for the development and implementation of programs to benefit wildlife and their habitats. The funding was intended to supplement, not duplicate, existing fish and wildlife programs, and to target species of greatest need of conservation, species indicative of the diversity and health of the state's wildlife, and species with low and declining populations, as deemed appropriate by the state's fish and wildlife agency.¹

These plans must incorporate these **8 required elements**:

1. Information on the distribution and abundance of species of wildlife, including low and declining populations as the State fish and wildlife agency deems appropriate, that are indicative of the diversity and health of the State's wildlife;
2. Descriptions of locations and relative condition of key habitats and community types essential to conservation of species identified in (1);
3. Descriptions of problems which may adversely affect species identified in (1) or their habitats, and priority research and survey efforts needed to identify factors which may assist in restoration and improved conservation of these species and habitats;
4. Descriptions of conservation actions proposed to conserve the identified species and habitats, and priorities for implementing such actions;
5. Proposed plans for monitoring species identified in (1) and their habitats, for monitoring the effectiveness of the conservation actions proposed in (4), and for adapting these conservation actions to respond appropriately to new information or changing conditions;
6. Descriptions of procedures to review the strategy at intervals not to exceed ten years;

¹ The authority for the DC Division of Fisheries and Wildlife to determine the selection criteria for species of greatest conservation need is given in first Required Element of this CWCS.

7. Plans for coordinating the development, implementation, review and the revision of the plan with Federal, State and local agencies and Indian tribes that manage significant land and water areas within the State or administer programs that significantly affect the conservation of identified species and habitats;
8. Congress also affirmed through this legislation that broad public participation is an essential element of developing and implementing these plans, the projects that are carried out while these plans are developed, and the Species in Greatest Need of Conservation that Congress has indicated such programs and projects are intended to emphasize.

The International Association of Fish and Wildlife Agencies (IAFWA) and the US Fish and Wildlife Service (USFWS) established **guiding principles** to supplement the 8 required elements.² These guiding principles provide recommendations across four topics that help improve and strengthen the CWCS development and revision process. The District used these principles to guide the development of the CWCS. They include:

1. Planning Process and Partnerships

- a. Involve multiple staff levels within each agency, and broad public-private partnerships, to develop and implement the Plan-Strategy.
- b. Involve partners that have the authorities necessary to ensure that the Plan-Strategy addresses the full range of issues at hand.
- c. Build capacity for cooperative engagement among all partners in the effort, and make sure that it is productive, so trust and confidence grow, and organizational and interpersonal relationships become strengths of the Plan-Strategy.
- d. Share responsibility and credit for planning and implementation among all partners, who collectively share responsibility for success of the Plan-Strategy.
- e. Focus on efficiency and effectiveness, so the value added in planning and implementation is commensurate to the funds invested.
- f. Ensure that the planning processes and the resultant Plans-Strategies are dynamic so they can be improved and updated efficiently as new information is gained.
- g. Communicate effectively with stakeholders, other partners, and the public, early and often.
- h. The planning processes, and the decisions made during planning, should be obvious to those who read and use the Plan-Strategy, and repeatable – document the processes and the decisions so the next planning cycle can build on this one.

² <http://www.teaming.com/pdf/State%20Strategies%20Guiding%20Principles.pdf>

2. Focus and Scope

- a. Base the Plan-Strategy in the principles of “best science,” “best management practices,” and “adaptive management,” with measurable goals, objectives, strategies, approaches, and activities that are complete, realistic, feasible, logical, and achievable. Describe these processes and practices sufficiently that partners understand what they entail and how they should function.
- b. Address the broad range of wildlife and associated habitats, with appropriate priority placed on those species of greatest conservation need and taking into account the relative level of funding available for conservation of those species
- c. Integrate and address wildlife-related issues statewide, across jurisdictions and interests, and coordinate with parallel efforts in other States and countries.
- d. Combine landscape/ecosystem/habitat-based approaches and smaller-scale approaches (e.g. focal, keystone, and/or indicator species; guilds; species of special concern) for planning and implementation.
- e. Make the Plan-Strategy an effective, long-lasting blueprint for conservation that provides a broad vision and priorities, so a broad array of organizations, including other government agencies and NGOs, can help realize the vision. The Plan-Strategy should have sufficient flexibility to respond to the full spectrum of conditions and circumstances likely to be encountered within the planning area.

3. Format and Content

- a. Make the Plan-Strategy readable, understandable, and useful, with well-defined issues, short and long-term goals and objectives, strategies, and realistic measures of performance that enable State agencies and their partners to demonstrate accountability.
- b. Make full and effective use of relevant existing information; in particular, integrate appropriate elements of other plans and initiatives (such as Partners-in-Flight and the many regional and other plans), databases, GIS layers, records, reports, other information sources, and management information systems that overlap or complement these Plans-Strategies.
- c. Identify knowledge gaps, as well as areas of knowledge, to help focus future efforts to improve understanding and planning, but do not allow a lack of information to inappropriately limit necessary short-term application of the best available science and good judgment in decision-making.
- d. Make the Plan-Strategy spatially explicit, to the extent feasible and appropriate, with a full complement of GIS and other maps, figures, and other graphics, as well as appropriate text to provide sufficient detail and consistency in describing species and habitat conditions, conservation needs, conservation recommendations, and other issues/actions, so it can be used effectively by all partners.
- e. Use “threats analyses,” “risk and stressor assessments,” and other techniques to help set priorities for goals, objectives, strategies, and activities.

- f. In addition to wildlife, address factors that can have substantial impact on wildlife conservation, such as management of invasive species, wildlife-related and conservation-related education, law enforcement, and outdoor recreation.
- g. Include a comprehensive glossary, so partners and the public have a shared and common understanding of key terms used in the Plan-Strategy.
- h. Develop an updatable information system to monitor Plan-Strategy implementation and the status and trends of wildlife and habitat.
- i. Consider wildlife conservation-related education and wildlife-associated recreation as tools that can help accomplishing conservation goals.

4. Completion, Outcomes and Availability

- a. Provide annual written progress updates on the planning effort and progress to IAFWA's CARA Implementation Committee each September, in addition to annual performance reports that must be submitted to the U.S. Fish and Wildlife Service pursuant to Federal Aid guidelines.
- b. Ensure that the Plan-Strategy clearly and definitively meets State obligations to Congress under the WCRP and SWG legislation, and to the U.S. Fish and Wildlife Service with regard to Federal Aid administration.
- c. Provide sufficient documentation in or with the Plan-Strategy to facilitate public understanding of the decisions that are made, how and why they were made.
- d. Make the Plan-Strategy a driving force in guiding activities under diverse wildlife and habitat conservation initiatives, and usable for helping to inform land-use decision-making.
- e. Make the Plan-Strategy readily available to the public in a variety of media.
- f. Provide a mechanism for reporting accomplishments and tracking progress so local partners are aware of both.
- g. Ensure that the Plan-Strategy can be implemented, i.e. that it is administratively and politically feasible, and that there are sufficient resources (funding and staff) among the partners to accomplish significant gains at a large scale, and within an appropriate time frame, to preserve our Nation's wildlife heritage.

Background on the DC Fisheries and Wildlife Division

The DC Fisheries and Wildlife Division was charged with developing and implementing the District's CWCS. The primary responsibility for managing and protecting wildlife rests with the states and the District of Columbia.³

The Division belongs to the Environmental Health Administration of the DC Department of Health. In 2006, the Division will migrate to the new DC Department of the Environment as the Bureau of Fisheries and Wildlife. Currently, the Division is divided into three branches:

- Fisheries Research Branch
- Wildlife Research Branch
- Aquatic and Wildlife Education Branch

The **Fisheries Research Branch** was implemented as a program in 1986. Its mission is to protect and enhance the District's fish populations and aquatic resources. The Branch conducts annual surveys to monitor populations of migratory and resident fish as well as assess water quality conditions and the state of aquatic habitats. This data is used to identify the conservation needs of the District's fish species and their habitats.

Current research projects⁴ include:

- Anadromous and resident fish surveys
- Ichthyoplankton studies to determine the spawning success of both anadromous and resident fish species
- Research to determine age and growth rate of fish
- Monitoring and evaluation to assess and improve fish habitat
- Monitoring to assess the yearly trends of the extent, density, and species composition of submerged aquatic vegetation
- Restoration activities including a hatchery for American Shad, one of the District's most critical fish species of greatest conservation need
- Angler surveys to determine who is fishing in the District

³ Musgrave, Ruth, and J.D. and Mary Anne Stein. *State Wildlife Laws Handbook*. Albuquerque: Center for Wildlife Law, 1993, p 14.

⁴ Tilak, R. and M.J. Siemien. Annual Reports. Biological survey of the anadromous and resident fishes of the Potomac and Anacostia Rivers within the District of Columbia, 1990-1997. Submitted to U.S. Fish and Wildlife Service, and Siemien, M. J. Annual Reports. Biological survey of the anadromous and resident fishes of the Potomac and Anacostia Rivers within the District of Columbia, 1998-2005. Submitted to U.S. Fish and Wildlife Service.

The **Wildlife Research Branch** was established in 2000. Its mission is to protect and enhance the District's wildlife species and their habitats.

Current research projects include:

- Annual bird surveys of migratory, resident and breeding bird species
- Annual winter shorebird surveys

The purpose of these surveys is to build the foundation for developing an historical database from which population trends and conservation needs can be identified. Additional surveys are being implemented to include all wildlife taxa, including reptiles, amphibians, mammals and invertebrates. A future research technique may include establishing a Monitoring Avian Productivity and Survivorship (MAPS) station within the District, which would determine the productivity and survivorship of breeding bird species. As part of this CWCS, these surveys will be used to monitor the success of the CWCS's conservation actions and revise the strategy, as necessary. The Wildlife Research Branch also houses the Natural Heritage Program for the District.

The **Aquatic and Wildlife Education Branch** involves students and the general public in wildlife conservation. The Branch plays an integral role in fulfilling Required Element #8—public involvement in the development and implementation of the CWCS.

Current projects include:

- Residential Backyard Habitat Program
- Schoolyard Habitat Program
- Fishing clinics
- Aquatic Resources Education Center (AREC)

The Residential Backyard Habitat Program educates the public to the mutual benefits of providing wildlife habitat in their own backyards. Fishing clinics provide hands-on instruction to the public on fishing techniques, while providing information on species and habitat ecology and generating interest in fish conservation. The AREC is a facility devoted to educating students and the public about the aquatic ecology of the Potomac and Anacostia Rivers.⁵ The AREC houses exhibits, displays, aquariums, and educational computer programs. In 2005, it also became the location of the American Shad hatchery.

⁵ Whitworth, Sylvia (1998-2004) Annual Reports. Aquatic Resources Education Performance Report for the District of Columbia, 1998-2004. Submitted to U.S. Fish and Wildlife Service.

Problem and Need

Sustaining a healthy environment among an urban area is one of the greatest conservation challenges of land managers, developers and policymakers within the District. The staff of the Fisheries and Wildlife Division aims to meet this need by developing and implementing the CWCS. However, there are many challenges in terms of taking conservation actions, including research needs and building partnerships and public interest.

In response to these needs, the Division has taken the lead in building the partnerships that capture the expertise to fulfill the District's conservation goals. This has been made possible by the funds provided by the US Fish and Wildlife Service. Thus far, the Division established a Fisheries Research Branch that includes long-term planning and conservation efforts for the District's fish species and their habitats. Fifteen years of research on the District's fish species has helped enhance fish populations, water quality and public interest in fish and water conservation. However, 12 of the District's 90 fish species are species of greatest conservation need and many aquatic habitats are in dire condition. Because the Fisheries Research Branch provides most of the data used to develop fish conservation strategies, the continued financial support for this program will be critical for the success of the District's CWCS.

The Wildlife Research Branch, on the other hand, has only been implemented since 2002. Therefore, at the time of writing this CWCS, only three years of research have been conducted for bird species and none for other wildlife taxa. Many more years of research will be needed to be able to identify population trends and conservation needs for the District's 136 non-fish wildlife species of greatest conservation need. There are also significant knowledge and resource gaps in terms of research and conservation planning that must be addressed before the Branch can conduct this research. Furthermore, the District does not have jurisdiction over much of the priority land for conservation. Instead, priority habitats in the District span both local and federal land. Therefore, the Wildlife Research Branch has partnered with the National Park Service and other land management agencies, both federal and local, to develop and implement the District's CWCS.

As mentioned, the Division staff has focused its research on fish and bird species because of funding limitations. It currently has very little information regarding other wildlife taxa. Therefore, many of the examples and explanations used in this document refer to bird and fish species. This is for no other reason than the Division has more extensive population and ecology information for the District's fish and bird species. The text in this document reflects the best knowledge available and does not intend to prioritize one taxa over another. Where the document lacks information on other wildlife taxa indicates the need for further research and exploration of those species.

Threats

Today, much of the District's land is urbanized and its habitats are fragmented, causing dire consequences for wildlife. Indeed, as a result, the District is home to 149 species of greatest conservation need. For example, the District is an important breeding location for the Cerulean Warbler, but has limited unfragmented hardwood forest to sustain them.

The conservation actions identified in the District's CWCS are targeted at specific threats to habitats. Because the number and extent of the threats are constantly increasing, there has never been a more important time to restore the District's natural heritage and there is no better tool to develop conservation strategies than with the funds from the State Wildlife Grant Program.

Major threats include invasive and alien species, recreation, fragmentation, dumping, contaminants, sedimentation, changes to hydrologic regimes, stormwater erosion, and pollution. Chapter 6 provides tables that prioritize all of the threats and their associated habitats, as well as provides descriptions of threats. Chapter 7 describes conservation actions targeted at threats to specific habitats.

Conservation Legislation and Partners

Existing Conservation Legislation

While the District has a long way to go in terms of wildlife conservation, there are already several pieces of legislation in place that serve to protect the District's wildlife. Below is a selection of existing conservation legislation.

- State Wildlife Laws⁶
 - State power to manage wildlife
 - DC wildlife policy and enforcement
 - Fishing licenses
- DC Official Code⁷
 - Title 8—Environmental and Animal Control and Protection
 - Chapter 16—Criminal Offenses—Game and Fish Laws
- Water Pollution Control Act of 1984⁸
 - Chapter 15—No hunting, killing or taking of wildlife
 - Exceptions

⁶ Musgrave, Ruth and Mary Anne Stein. *State Wildlife Laws Handbook*. Albuquerque: Center for Wildlife Law, 1993.

⁷ District of Columbia. *District of Columbia Official Code 2001 Edition*. District of Columbia, 2002.

⁸ Water Pollution Control Act of 1984, p. 2032-3.

- Parks and Recreation Master Plan⁹
 - Framework for improving parks and recreational areas
 - Incorporating environmentally-friendly practices
- Combined Sewer Overflow Control Plan¹⁰
 - Improvements to Blue Plains Wastewater Treatment Plant
- DC Office of Planning¹¹
 - DC Comprehensive Plan¹²
 - Chapter 4—Environmental Protection Element
 - Anacostia Waterfront Initiative¹³
 - Water quality
 - Shoreline restoration
 - Fishable and swimable by 2020
- Wetlands Act of 1972¹⁴
 - Federal protection for the Potomac River
- Capper-Crampton Act¹⁵
 - Establishment of parks in the National Capital Region

Key Conservation Partners

In response to the threats listed above, conservation agencies and organizations are taking action for the District's wildlife species of greatest conservation need. Partnerships with these agencies and organizations were and remain essential to both the development and implementation phases of this CWCS. The varied jurisdictions of land among local and federal agencies required coordination among these entities in order to best conserve species of greatest conservation need all over the District. The synergy of expertise resulted in the best possible strategies for conservation actions. The following conservation agencies and organizations share the interest in conserving the District's wildlife species and their habitats and contributed to the planning process depending on their expertise.

⁹ Parks and Recreation Master Plan. <http://dpr.dc.gov/dpr/cwp/view,a,1239,q,629499,dprNav,|32112|.asp>

¹⁰ DC Water and Sewer Authority. <http://www.dcwasa.com/education/css/longtermcontrolplan.cfm>

¹¹ <http://planning.dc.gov/planning/site/default.asp?planningNav=|32337|>

¹²

http://planning.dc.gov/planning/frames.asp?doc=/planning/LIB/planning/documents/docs/Chapter_4_Environmental_Protection.PDF

¹³ DC Office of Planning.

http://planning.dc.gov/planning/cwp/view,a,1285,q,571105,planningNav_GID,1708.asp

¹⁴ Partners in Flight. *Bird Conservation Plan for the Mid-Atlantic Coastal Plain*. Williamsburg: College of William and Mary, 1999, pg. 8.

¹⁵ http://www.cr.nps.gov/history/online_books/nace/adhi3g.htm

--Government agencies

- **DC Fisheries and Wildlife Division**

The Division is taking the lead on developing and implementing the CWCS. The mission of this Division is to protect and enhance the District's wildlife and habitats. The Fisheries Research Branch of this division has developed and implemented management plans for the fish species of the District that include population studies and water quality management. It supplied all of the data concerning fish species and habitat conservation for this CWCS. The Wildlife Research Branch of this division is implementing a program to inventory and conserve bird species occurring in the District. The Aquatic and Wildlife Education Branch is involved in the public outreach and education portion of the CWCS.

- **National Park Service**

The mission of the National Park Service (NPS) is to preserve unimpaired the natural and cultural resources and values of the national park system for the enjoyment, education, and inspiration of this and future generations.¹⁶ NPS manages parks, monuments, cemeteries, and other natural and historic sites in the District. Both Rock Creek Park and National Capital Parks—East have been central the development of the CWCS. They were the primary sources of species and habitat data, as well as helpful in editing and developing the selection processes. They are also currently developing the Canada Goose management plan that has been incorporated into the CWCS. A strategy of this CWCS is to fully implement their existing conservation actions. NPS will remain a close partner in the implementation and review phases of the CWCS.

- **United States Geological Survey**

The mission of the Patuxent Wildlife Research Center of the United States Geological Survey (USGS) is to excel in wildlife and natural resource science and provide the information needed to better manage the nation's biological resources.¹⁷ The Center was the primary source of data regarding the status of breeding birds in the District, as well as helpful in editing and developing the selection processes. It also participates in the Canada Goose management actions and will be important for the implementation phase of the CWCS.

- **Maryland Department of Natural Resources**

The mission of the Maryland Department of Natural Resources (MD DNR) is to preserve, protect, enhance and restore Maryland's natural resources for the wise use and enjoyment of all citizens.¹⁸ MD DNR is also responsible for developing the CWCS for the state of Maryland. Because Maryland and the District share common habitats and regional priorities, the District coordinated with MD DNR in the development of the CWCS to ensure consistency. As a result, Maryland and the

¹⁶ <http://www.nps.gov/legacy/mission.html>

¹⁷ <http://www.pwrc.usgs.gov/aboutus/mission.cfm>

¹⁸ <http://www.dnr.state.md.us/mission.asp>

District share many of the same criteria and Maryland's species of greatest conservation need were included in the species selection process of this CWCS.

- **United States Fish and Wildlife Service**

The mission of the US Fish and Wildlife Service (USFWS) is to work with others to conserve, protect and enhance fish, wildlife and plants and their habitats for the continuing benefit of the American people.¹⁹ USFWS provided guidance on the approach, format, and selection of species of the CWCS.

- **United States Department of Agriculture**

The mission of the Agricultural Research Service (ARS) is the main in-house scientific research agency of the US Department of Agriculture (USDA).²⁰ Part of their plant research efforts comes from the National Arboretum (USNA). The USNA was created in 1927 by an Act of Congress and placed under USDA. The National Arboretum provided data on threats to habitats and a strategy of this CWCS is to fully implement their existing and future conservation actions.

--Nongovernmental partners

- **Natural Heritage Program**

The National Heritage Program (NHP) inventories, catalogues and facilitates protection of rare and outstanding elements of the natural diversity of the United States. The plant and animal species identified by the NHP are species that merit conservation action and thus their ratings were included in our criteria for selection species of greatest conservation need. The NHP also provided much of the data regarding the listing of all species occurring within the District. DC Fisheries and Wildlife houses the NHP of the District and will carry out its mission in accordance with the CWCS.

- **The Nature Conservancy**

The mission of the Nature Conservancy (TNC) is to preserve the plants, animals and natural communities that represent the diversity of life on Earth by protecting the lands and waters they need to survive.²¹ TNC provided guidance on the approach and format of the CWCS.

- **Maryland-DC Audubon**

The mission of the Audubon Society is to conserve and restore natural ecosystems, focusing on birds, other wildlife and their habitats for the benefit of humanity and earth's biological diversity. MD-DC Audubon was a key partner in developing criteria for determining species of greatest conservation need and key habitat types.

¹⁹ <http://www.fws.gov/mission.html>

²⁰ <http://www.ars.usda.gov/main/main.htm>

²¹ <http://nature.org/>

- **DC Audubon**

DC Audubon provided habitat data for bird species and helped in the public outreach portion of the CWCS by informing its members of the public review meetings.

- **International Association of Fish and Wildlife Agencies**

The International Association of Fish and Wildlife Agencies (IAFWA) represents the government agencies for North America's fish and wildlife resources. IAFWA applies expertise in science, policy, economics and coalition-building to serve its members as a national and international voice on a broad array of wildlife and conservation issues. IAFWA was key to organizing this nation-wide effort by, among other activities, holding training workshops for the developers of CWCSs and coordinating the effort across the nation.

- **Defenders of Wildlife**

The mission of Defenders of Wildlife is to dedicate themselves to the protection of all native wild animals and plants in their natural communities.²² Defenders of Wildlife provided guidance on the approach and format of the CWCS.

--Academic partners

- **Howard University**

Provided data on the status of amphibian species of conservation need.

²² <http://www.defenders.org/about/>